



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,456	10/06/2006	Sergei Kniajanski	KNIAJANSKI 1	8179
1444 7590 03/05/2010 BROWDY AND NEIMARK, P.L.L.C. 624 NINTH STREET, NW SUITE 300 WASHINGTON, DC 20001-5303				
EXAMINER				
TESKIN, FRED M				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
03/05/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/568,456

**Applicant(s)**

KNIAJANSKI ET AL.

**Examiner**

Fred M. Teskin

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-44 is/are pending in the application.  
4a) Of the above claim(s) 20-44 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-19 is/are rejected.  
7) ☒ Claim(s) 4, 10 and 18 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 15 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
4) ☐ Interview Summary (PTO-413)  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_  
Paper No(s)/Mail Date \_\_\_\_\_

**Detailed Action**

***Election/Restriction***

Applicant's election with traverse of the invention of Group I, claims 1-19, in the reply filed on 10/21/2009 is acknowledged. The traversal is on the ground(s) that Kang does not show or make obvious the common subject matter between elected Group I and nonelected Group II, and therefore unity of invention does exist. This is not found persuasive because even if Kang fails to show or make obvious the common subject matter between the two groups, the fact remains that Group I recites various special technical features which are not required for Group II. In particular, Group I has special technical features directed to a polymer composition comprising from (A) *15 to 85% by weight* of a copolymer containing at least one block from 10 to 5000 *mainly syndiotactic structural sequences* of monomer units resulting from at least one substituted or unsubstituted vinyl aromatic monomer, and at least one block formed by 10 to 4000 monomer units resulting from at least one dienic monomer having *mainly a 1,4-cis structure*; (B) *from 15 to 85% by weight* of a polymer resulting from dienic monomers having a molecular weight between 6000 and 600000, wherein the *contents of 1,4-cis monomer units is of at least 90%*; and (C) *up to 70%* of a polymer resulting from substituted or unsubstituted vinyl aromatic monomers having a molecular weight between 1000 and 500000 and a *degree of syndiotacticity in terms of syndiotactic pentads of at least 95%*. None of the special technical features directed to weight percentages of (A), (B) and (C), syndiotactic structural parameters of (A) and (C), and content of 1,4-cis structure for each of the block of (A) formed by 10 to 4000 monomer

units resulting from at least one dienic monomer and the polymer (B) are required by the nonelected Group II claims. Accordingly, examiner maintains that unity of invention does not exist herein in that the inventions grouped as Group I and Group II lack the same or corresponding special technical features.

The requirement is still deemed proper and is therefore made **FINAL**.

Claims 20-44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/21/2009.

### ***Claim Objections***

Claim 4 is objected to because of the following informalities: the chemical name of the final monomer is incorrect in that "N-N'-dimethyl..." should read --N-N-dimethyl...-, both methyl groups being attached to the same amino nitrogen.

Claim 10 is objected to because of the following informalities: the term "alkoxyde" in the penultimate line should read --alkoxide--.

Claim 18 is objected to because of the following informalities: in the range "10 y 1000...", "y" should be corrected to --and--.

Appropriate correction is required.

### ***Claim Rejections***

Claims 1-19 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, the following grounds for indefiniteness apply to the indicated claims.

Regarding claim 1, the expression "up to 70%..." is ambiguous absent recitation of the basis on which the percentage is to be calculated. It appears from the antecedent disclosure that percent by weight may be intended (cf. Table I, definition of abbreviation PC%); however, clarification and appropriate correction are required.

Regarding claim 10, the claim is indefinite due to improper Markush language in the recitation "X is selected from the hydroxyl, ... or ... alkyl groups". Either "selected from the group consisting of ... and ..." or "wherein X is hydroxyl ... or ... alkyl" is proper; see MPEP 2173.05(h)(I).

### ***Citation of Pertinent Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zambelli et al is cited as pertinent to synthesis of styrene-butadiene block copolymers comprised of syndiotactic polystyrene blocks and cis-1,4-polybutadiene blocks, and the corresponding hydrogenate (note col. 15, lines 45+ and col. 21, lines 24-36). A polymer composition according to the present invention is not disclosed nor adequately suggested.

***Conclusion***

Claims 1-19 would be allowable if amended or rewritten to overcome the informality objections and rejection under 35 U.S.C. 112 set forth in this Office action. Examiner has not, as of the date of this Office action, located or identified any prior art document(s) that can be used to render the polymer composition defined by said claims anticipated or obvious to a person of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Fred M Teskin/

Primary Examiner, Art Unit 1796

Application/Control Number: 10/568,456  
Art Unit: 1796

Page 6